HAYSPUR HATCHERY
ANNUAL REPORT

INTRODUCTION

Hayspur Fish Hatchery is a rainbow trout Oncorhvnchus mvkiss broodstock and production facility located in Blaine County on Loving Creek, approximately 18 miles southeast of Hailey, Idaho. The water supply includes: 1) Hayspur Spring, 3.0 cfs at 53°F; 2) Loving Creek, 8-22 cfs ranging from 33 to 70°F; 3) two artesian wells, 2.5 cfs at 53°F; 4) and spring seepage into the broodstock pond, 2.0 cfs at 53°F.

The hatchery is staffed with three permanent employees and seven months of temporary time.

Fish rearing facilities consist of a hatchery building housing 18 single Heath incubator stacks and 20 early rearing vats. Outside rearing facilities include six fingerling raceways, six production raceways, eight round ponds with grain bin covers, and an earthen pond.

HATCHERY IMPROVEMENTS

Improvements to the hatchery this year were the following:

1. Construction of eight round ponds with 24-foot diameter grain bin covers and electrical apparatus for light control.

2. Construction of a headbox with degassification equipment and pipeline to appropriate rearing units. Cost for this construction was $481,000.

3. Campground and hatchery trees and shrubs were pruned and trimmed. An entrance sign was installed.

4. Hatchery early rearing tanks were repainted.

5. Headrace of production raceways was covered to suppress vegetative and algal fouling of head screen.

FISH PRODUCTION

The Hayspur broodstock (R9) yielded 4,655,214 eggs (Table 1). Fecundity averaged 3,449 eggs per female. Eye-up rates averaged 74.8%. A total of 1,102,580 eyed eggs were transported to Hagerman Fish Hatchery. The remainder of eggs collected were reared and stocked as fingerling or reared for stocking as catchable size trout in 1990.

Table 1. Brood Year 1988 spawning information (R9).

pie	Lot #	# females	Eggs/ ounce	Green eggs	Eggs/ female	Eyed #	% eyed	# eyed eggs shipped
10/11	1	141	264	379,632	2,692	349,160	91.9	349,160
10/18	2	201	264	397,056	1,975	313,094	74.8	0
10/24	3	168	264	373,296	2,222	359,300	96.3	103,240
10/31	4	310	290	805,620	2,599	526,000	65.3	0
11/07	5	229	290	796,340	3,478	588,000	73.8	0
11/14	6	185	296	698,320	3,775	451,136	63.6	350,030
11/21	7	136	290	518,810	3,815	404,940	78.0	0
11/29	8	108	290	421,660	3,904	347,465	82.4	300,150
2/05	9	30	290	141,520	4,717	84,392	59.6	0
2/12	10	18	290	89,900	4,994	38,229	42.5	0
2/19	11	8	290	30,160	3,770	20,373	67.5	0
[3]1/13	12	2	0	2,900	1,450	3,597	0	0
Tota:		1,536		4,655,214		3,485,686		1,102,580

Hayspur Hatchery produced 1,560,151 rainbow trout during fish year 1989 A total of 261,292 fish were 8 to 12 inches in length, and 1,298,859 fish were 3-to 6-inch fingerlings (Tables 2 and 3).

Fish produced were fed a total of 148,210 pounds. Overall conversion was 1.82 pounds to produce one pound of fish.

Production goals for catchable-size rainbow trout were met (102%). Fish in excess of goal were stocked into the Richfield Canal at the request of the region.

Production goals for fingerling were approached (81.7%), with only Magic Reservoir stocked with less than allocated (Table 4). With broodstock replacement rearing a priority, rearing space for fingerling remains at a premium.

FISH HEALTH

Whirling disease was detected at Hayspur Fish Hatchery this year. Mvxobolus cerebralis was first confirmed in catchables from Brood Year 1986. The finding led to extensive sampling to identify locations of positive fish populations. Loving Creek, which is above the hatchery, Gaver Lagoon, and some broodstock fish tested "positive." Catchables of Brood Year 1987 and Brood Year 1988 both tested "negative."

It should be noted that classic symptoms of deformity, such as "black tail" and "whirling," were absent.

Ramifications of sampling results included: 1) Gaver Lagoon was discontinued as a production pond/broodstock source, 2) A management plan was developed to rear fish in spring water to 3 inches prior to stocking in the production raceways,. which receive Loving Creek water, 3) Fish from Hayspur would be stocked only into Big Wood and Salmon River drainages.

Brood Year 1988-89 represents the second year of whirling disease negative catchables at Hayspur.

One outbreak of IPN (infectious pancreatic necrosis) was confirmed in production fish (R9) at Hayspur Hatchery. Total mortality reached 2,200 fish.

The presence of coldwater disease was confirmed in the Brood Year 1987 subcatchables, along with external parasites Gyrodactylus, Trichodina, and Epistylus. Treatment with potassium permanganate at .75, 1.0, and 2.0 ppm was administered over three consecutive days. Parasites were reduced, but not totally eliminated by the potassium permanganate treatment. Terramycin treated feed (TM 100) was fed for 21 days, and symptoms of coldwater disease disappeared.

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Table 2. Hayspur Fish Hatchery fingerling production October 1, 1988 to September 30, 1989.

Species	Source	Eyed eggs	# planted	% survival	Plant site	Cost	Comments
Rainbow	Hayspur	2,379,509	1,298,859	68.3	Region 4	5,667	325,700 held for catchables

Table 3. Hayspur Fish Hatchery catchable production October 1, 1988 to September 30, 1989.

Species	Source	# eggs	Yield #	Yield lbs	Eyed to plant	Plant site	Cost/ 1,000	Cost/ lb
Rainbow (R9)	Hayspur	420,000	261,292	69,473	62.2	Big Wood Upper Salmon	127.61	2.08

Table 4. Fish requested and produced October 1, 1988 to September 30, 1989.

Species & size	Production goal	Actual production	Percentage of goal achieved
R9 3”+ 1,590,000	1,298,859		81.7
R9 8-10”+	255,400	261,292	102.0

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The IPN eradication program that was initiated to develop a "Specific Pathogen Free" (SPF) broodstock from a low titer IPN population continues. Thirty-two surviving one-on-one pairings of adult fish were tested as being SPF at Eagle Fish Disease Laboratory. Eggs from individual pairings were incubated in isolation buckets until results of the parents were available. Their progeny were then pooled and split into two populations. One population was sent to American Falls Hatchery and the other was kept at Hayspur Hatchery. This provided a back-up population for the "Specific Pathogen Free" program. IPN was not detected in any of the adults.

Samples from spawning golden trout Oncorhynchus aquabonita adults also tested "negative" for specific pathogens.

PUBLIC RELATIONS

Over 6,000 people visited the manicured campground and upgraded visitor information area. Many positive comments were heard on the tree trimming and mowing.

A national-level dog field trial was hosted by Hayspur Hatchery.

Two hundred and ten broodstock fish were stocked into the Boise River with coverage by the media.

Tours and class presentations were given to: Bellevue Elementary, Hailey Junior High, and Hemingway School in Ketchum.

SPECIAL PROJECTS

Golden Trout

The golden trout trapping operation at Baker Lake ran from June 6, 1989 through June 30, 1989. Melt-off occurred on June 8, 1989. Seventeen golden trout and 106 cutthroat trout were trapped. The cutthroat trout were transported by bucket downstream past a barrier cascade and then released. The golden trout were moved to a live box until ripe. Of the 17 golden trout trapped, 29.4% exhibited symptoms that were consistent with coldwater/peduncle disease. Four females were spawned with two males and separated into two lots. A total of 1,738 eggs were taken, which yielded 800 eyed eggs for a 44.4% eye-up rate. Eyed eggs were transported to Ashton Fish Hatchery.

Mean length of adults increased from 7.95 inches (202 mm) to 9.12 inches (232 mm), indicating over an inch of annual growth.

On June 24, 1989, 73 pounds (1000 fish) of golden trout fingerlings were taken by helicopter to Baker Lake in a "bambi bucket". These fish ranged in size

from 5.5 to 8 inches. Personnel present agreed that this was a very successful plant. Three weeks after the plant, golden trout were observed "all over" the lake. It is anticipated that by 1991, these fish will produce the expected quota of eggs to produce 14,250 fry.

Improvements in the trapping operation at Baker Lake in 1989 included the following:

1. Construction and use of a lockable live box which insured that the golden trout captured would be contained until ripe.

2. Construction of a temporary dam behind the trap raising the water level. This significantly improved the number of cutthroat which entered the trap.

3. More reliable housing for on-site monitoring personnel by having a trailer at the base of the trailhead road.

4. Development of annual stocking rate of 600 (50/SA) fingerlings to be stocked in spring.

Butte Creek Cooperative Protect

A project to divert hatchery-discharged Loving Creek water from a channelized section to a meandering channel of Butte Creek was entered into with the Fly Fishers of Idaho, the 321st Engineering Battalion from Twin Falls, and Idaho Department of Fish and Game (IDFG). Development of a plan, including blueprints, EPA permit, Planning and Zoning approval, private contractor sign-off contract, and dates for excavation were completed. An upper-level Army decision concerning assistance projects delayed the September start-up. Completion of this excellent project is still viable pending upper-level approval during 1990.

Brown Trout

A site on the Big Wood River, downstream from Stanton's crossing (upstream from Magic Reservoir), was identified as suitable for a brown trout Salmo trutta trapping and spawning project. The portable weir trap was installed on October 19, 1988. Due to low water and lack of adult brown trout, personnel removed the trap prior to November 14th. Research personnel counted over 150 redds on November 14th. Should a need for this adfluvial stock exist, this time frame for spawning will be considered.

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